



# WASHOE COUNTY

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## STAFF REPORT

BOARD MEETING DATE: January 13, 2015

**DATE:** December 19, 2014  
**TO:** Board of County Commissioners  
**FROM:** Clara Lawson, P.E., PTOE, Licensed Engineer  
Community Services Department, 328-3603, [clawson@washoecounty.us](mailto:clawson@washoecounty.us)  
**THROUGH:** Dwayne Smith, P.E., Division Director, Engineering and Capital Projects,  
Community Services Department, 328-2043, [desmith@washoecounty.us](mailto:desmith@washoecounty.us)  
**SUBJECT:** Approve the Regional Road Impact Fee land use assumptions and adopt the  
Regional Road Impact Fee Capital Improvements Plan as required by NRS  
278B.190 and NRS 278B.210. (All Commission Districts.)

### SUMMARY

The Washoe County Board of County Commissioners (Board) will approve the Regional Road Impact Fee land use assumptions and adopt the Regional Road Impact Fee Capital Improvements Plan.

Washoe County Strategic Objective supported by this item: Sustainability of our financial, social and natural resources.

### PREVIOUS ACTION

On October 28, 2014, the Board approved an Interlocal Agreement Regarding Regional Road Impact Fees Pursuant to NRS Chapter 277 and Chapter 278B between Washoe County, the Cities of Reno and Sparks and the Regional Transportation Commission (RTC) for the continuation of the Regional Road Impact Fee Program.

On November 12, 2014, the Board adopted a resolution initiating an amendment to the Development Code, Chapter 110 of County Code, at Article 706, Impact Fees.

On November 12, 2014, the Board adopted a resolution establishing the Washoe County Planning Commission as the Washoe County Capital Improvements Advisory Committee (CIAC) for the Regional Road Impact Fee Program as authorized within NRS 278B.150

On November 13, 2014, the Planning Commission acknowledged receipt of the "Regional Road Impact Fee Program, 5<sup>th</sup> Edition Update".

AGENDA ITEM # 14

On January 6, 2015 the CIAC reviewed the Regional Road Impact Fee land use assumptions and affirmed that the land use assumptions are in conformance with the Washoe County Master Plan. The CIAC also reviewed and provided comments on the Regional Road Impact Fee Capital Improvements Plan to be presented to the Board.

On January 6, 2015 the Planning Commission approved a resolution to recommend amendments to Washoe County Code, Chapter 110 (Development Code), at Article 706, Impact Fees (DCA 14-013).

## **BACKGROUND**

The Regional Road Impact Fee (RRIF) was created as a funding mechanism for regional roadway capacity improvement projects which are directly related to new development. Nevada Revised Statutes (NRS) 278B allows the imposition of such an impact fee and requires the local government to approve the land use assumptions used to develop the capital improvements plan before any impact fee can be imposed. An impact fee is defined as a charge imposed by a local government on new development to finance the costs of a capital improvement or facility expansion necessitated by and attributable to the new development. The RRIF has been in effect since February 1996.

In accordance with the provisions of the Interlocal Cooperative Agreement entered into by the RTC, Washoe County, the City of Reno, and the City of Sparks, the RTC is responsible for initiating periodic reviews of the RRIF program and proposing modifications to the participating governments. The review process is undertaken by the RTC in conjunction with the RRIF Technical Advisory Committee (RRIF TAC), which includes local government technical experts, development representatives from the private sector, and members of the local planning commissions.

As defined in NRS 278B.060, "land use assumptions" means projections of changes in land use, densities, intensities and population for a specified service area, over a period of at least ten years, and in accordance with the master plan of the local government. The RRIF CIP land use assumptions are attached as Appendix A for reference. The 2012 consensus forecast, as approved by the Truckee Meadows Regional Governing Board was used to develop the updated RRIF and the introduction to the 2012 consensus forecast is included as Attachment B for reference. Washoe County Planning Staff worked with the Truckee Meadows Regional Planning Agency (TMRPA) to ensure that the 2012 consensus forecast was in compliance with the Washoe County Master Plan. The RRIF TAC had no objection to using the consensus forecast to update the RRIF land use assumptions. TMRPA in partnership with RTC, the Nevada Department of Transportation (NDOT), Washoe County, Reno and Sparks, created an allocation based model using the population and employment forecasts from the consensus forecast to project where future growth is likely to occur within the service areas. NRS 278B.100 defines "service area" as any specified area within the boundaries of a local government in which new development necessitates capital improvements or facility expansions and within which new development is served directly and benefited by the capital improvement or facility expansion as set forth in the capital improvements plan. A map of the RRIF service area is included as Attachment C. The model used development factors such as approved building permits, existing land use, regulatory zoning, topography, existing and planned infrastructure, and public services along with a collaboration discussion with local government staff to determine the geographical

distribution of future growth. This information was used in the RTC regional travel demand model to identify new capacity projects for the region.

As required by NRS 278B.150, the Washoe County Planning Commission, acting as the CIAC, affirmed that the Regional Road Impact Fee land use assumptions are in conformance with the Washoe County Master Plan. Those land use assumptions are included as Attachment A to this staff report. There are no guidelines in either State Law or the Development Code for such a determination of conformance, so the CIAC used the findings for a Master Plan Amendment (WCC Section 110.820.15) when making their determination of conformance. Those findings, and the comments associated with each finding are outlined below.

1. Consistency with Master Plan. The land use assumptions are in substantial compliance with the policies and action programs of the Master Plan.

*Staff comment: Land use assumptions are based on land uses and densities allowed in the Master Plan. The latest version of the Washoe County Master Plan was adopted by the Washoe County Planning Commission on May 20, 2010.*

2. Response to Change Conditions. The land use assumptions respond to changed conditions or further studies that have occurred since the plan was adopted by the Board of County Commissioners and the assumptions represent a more desirable utilization of land.

*Staff comment: Projected population and employment are based on the 2012 Consensus Forecast and provides the changed conditions from the current RRIF.*

3. Availability of Facilities. There are or are planned to be adequate transportation and other facilities to accommodate the uses and densities projected by the land use assumptions.

*Staff comment: Planning Staff reviewed and commented on the draft 2012 Consensus Forecast, based not only on master plan categories within the County's Master Plan but also on adopted regulatory zoning. This allowed staff to comment on the potential transportation facilities required to support future growth within the limits of adopted master plan categories and regulatory zones.*

4. Desired Pattern of Growth. The land use assumptions will promote the desired pattern for the orderly physical growth of the County and guide development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

*Staff comment: The 2012 consensus forecast is approved by the Truckee Meadows Regional Governing Board and includes the County's Master Plan categories and resulting adopted regulatory zones. RTC translates the consensus forecast into geographic centric areas for projection of growth and resulting demands for future transportation improvements. The RTC geographic areas used in developing the RRIF, therefore, mirror the desired growth pattern as established in the Washoe County Master Plan.*

The CIAC also reviewed the RRIF Capital Improvements Plan and provided comments on the Plan to the Board as required by NRS 278B. 150. The CIAC met on January 6, 2015 and their

written comments were not available at the time this staff report was written. Staff will include those comments to the Board as soon as they are available, and at the Board meeting on January 13, 2015.

NRS 278B.190 requires the Board to approve the RRIF land use assumptions for any proposed impact fees within designated service areas. Per NRS 278B.180(c) a map of the service area to which the land assumptions apply is provided in Attachment C. The designated RRIF service areas are defined in the RRIF Capital Improvements Plan. NRS 278B.210 also requires the Board to adopt the RRIF Capital Improvements Plan before imposing any associated impact fees. The Capital Improvements Plan for the North and South service areas are provided in Attachment D. That NRS section also requires that the Board impose any such impact fees through ordinance. The RRIF ordinance is scheduled for an introduction and first reading at the Board's January 13, 2015 meeting.

### **FISCAL IMPACT**

There is no fiscal impact associated with this item.

### **RECOMMENDATION**

It is recommended the Board of County Commissioners approve the Regional Road Impact Fee land use assumptions and adopt the Regional Road Impact Fee Capital Improvements Plan.

### **POSSIBLE MOTION**

Should the Board agree with the recommendation, a possible motion would be:

“Move to approve the Regional Road land use assumptions and adopt the Regional Road Impact Fee Capital Improvements Plan.”

## APPENDIX A: LAND USE ASSUMPTIONS

As defined in NRS 278B.060, “land use assumptions” means projections of changes in land use, densities, intensities and population for a specified service area, over a period of at least ten years, and in accordance with the master plan of the local government. In NRS 278B.100 “service area” is defined as any specified area within the boundaries of a local government in which new development necessitates capital improvements or facility expansions and within which new development is served directly and benefited by the capital improvement or facility expansion as set forth in the capital improvements plan.

### Key Growth Indicators

Population and job projections from the 2012 Consensus Forecast were used to derive the Regional Road Impact Fees (RRIF) for the north and south service areas. TischlerBise obtained 2010 and 2025 population and job data, with interim years derived using a compound growth equation. Dividing annual population projections by the average number of persons per housing unit yields projected housing units by service area.

### Persons per Housing Unit

The 2010 census did not obtain detailed information using a “long-form” questionnaire. Instead, the U.S. Census Bureau has switched to a continuous monthly mailing of surveys, known as the American Community Survey (ACS), which is limited by sample-size constraints. For example, data on detached housing units are now combined with attached single units (commonly known as townhouses).

TischlerBise recommends that impact fees be imposed for two residential categories. According to the U.S. Census Bureau, a household is a housing unit that is occupied by year-round residents. Development fees often use per capita standards and persons per housing unit, or persons per household, to derive proportionate-share fee amounts. TischlerBise recommends that fees for residential development be imposed according to the number of year-round residents per housing unit. As shown Figure A1, the U.S. Census Bureau estimates Washoe County had 185,289 housing units in 2012. Dwellings with a single unit per structure (detached, attached, and mobile homes) averaged 2.49 persons per housing unit. Even though townhouses are attached, each unit is on an individual parcel and is considered to be a single unit. Dwellings in structures with multiple units averaged 1.77 year-round residents per unit. This category includes duplexes, which have two dwellings on a single land parcel. The overall average is 2.28 year-round residents per housing unit.

**Figure A1 – Persons per Unit by Type of Housing in Washoe County**

**2012 Summary by Type of Housing from American Community Survey**

Units in Structure	Renter & Owner		Persons per Household	Housing Units	Persons per Housing Unit	Housing Mix
	Persons	Households				
Single Unit*	331,138	120,491	2.75	133,117	2.49	72%
2+ Units	92,154	43,411	2.12	52,172	1.77	28%
Subtotal	423,292	163,902	2.58	185,289	2.28	Vacancy Rate 12%
Group Quarters	6,616					
TOTAL	429,908	163,902		185,289		

\* Single family includes detached, attached, and mobile homes.

Source: Tables B25024, B25032, B25033, and B26001.

2012 1-Year Estimates, American Community Survey, U.S. Census Bureau.

## Customized Trip Generation Rates per Housing Unit

As an alternative to simply using the national average trip generation rate for residential development, the Institute of Transportation Engineers (ITE) publishes regression curve formulas that may be used to derive custom trip generation rates, using local demographic data. Key independent variables needed for the analysis (i.e. vehicles available, housing units, households and persons) are available from American Community Survey data for Washoe County. Customized average weekday trip generation rates by type of housing are shown in Figure A2. A vehicle trip end represents a vehicle either entering or exiting a development, as if a traffic counter were placed across a driveway. The custom trip generation rates for Washoe County are lower than national averages. For example, single-unit residential development in Washoe County is expected to produce 8.27 average weekday vehicle trip ends per dwelling, which is lower than the national average of 9.57 (see ITE code 210). For apartments (ITE 220) the national average is 6.65 trips ends per dwelling on an average weekday. The recommended custom rate of 5.37 for Washoe County is lower than the national average.

**Figure A2 - Residential Trip Generation Rates by Type of Housing**

Washoe County, Nevada		Households (2)			Vehicles per Household by Tenure
	Vehicles Available (1)	Single Unit per Structure	2+ Units per Structure	Total	
Owner-occupied	198,288	90,066	3,167	93,233	2.13
Renter-occupied	95,390	30,425	40,244	70,669	1.35
<b>TOTAL</b>	<b>293,678</b>	<b>120,491</b>	<b>43,411</b>	<b>163,902</b>	<b>1.79</b>
	Housing Units (6) =>	133,117	52,172	185,289	

Units per Structure	Persons (3)	Trip Ends (4)	Vehicles by Type of Housing		Average Trip Ends	Trip Ends per Housing Unit
				Trip Ends (5)		
Single Units	331,138	856,992	232,621	1,344,672	1,100,832	<b>8.27</b>
2+ Units	92,154	319,710	61,057	240,860	280,285	<b>5.37</b>
<b>TOTAL</b>	<b>423,292</b>	<b>1,176,702</b>	<b>293,678</b>	<b>1,585,532</b>	<b>1,381,117</b>	<b>7.45</b>

(1) Vehicles available by tenure from Table B25046, American Community Survey, 2012, 1-Year Estimates.

(2) Households by tenure and units in structure from Table B25032, American Community Survey, 2012.

(3) Persons by units in structure from Table B25033, American Community Survey, 2012.

(4) Vehicle trips ends based on persons using formulas from Trip Generation (ITE 2012). For single unit housing (ITE 210), the fitted curve equation is  $EXP(0.91 * LN(persons) + 1.52)$ . To approximate the average population of the ITE studies, persons were divided by 594 and the equation result multiplied by 594. For 2+ unit housing (ITE 220), the fitted curve equation is  $(3.47 * persons) - 64.48$ .

(5) Vehicle trip ends based on vehicles available using formulas from Trip Generation (ITE 2012). For single unit housing (ITE 210), the fitted curve equation is  $EXP(0.99 * LN(vehicles) + 1.81)$ . To approximate the average number of vehicles in the ITE studies, vehicles available were divided by 904 and the equation result multiplied by 904. For 2+ unit housing (ITE 220), the fitted curve equation is  $(3.94 * vehicles) + 293.58$ .

(6) Housing units from Table B25024, American Community Survey, 2012.

## Floor Area of Nonresidential Development

In Figure A3, gray shading indicates three nonresidential development prototypes used by TischlerBise to convert job projections into nonresidential floor area estimates. Average weekday vehicle trip generation rates are from the Institute of Transportation Engineers (ITE 2012). The prototype for industrial jobs is “Warehousing”. The prototype for commercial development, including retail and eating/drinking places, is an average-size shopping center. The prototype for all other service jobs is an average-size general office building.

**Figure A3 – Employee and Building Area Ratios**

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit*	Wkdy Trip Ends Per Employee*	Emp Per Dmd Unit	Sq Ft Per Emp
110	Light Industrial	1,000 Sq Ft	6.97	3.02	2.31	433
130	Industrial Park	1,000 Sq Ft	6.83	3.34	2.04	489
140	Manufacturing	1,000 Sq Ft	3.82	2.13	1.79	558
150	Warehousing	1,000 Sq Ft	3.56	3.89	0.92	1,093
254	Assisted Living	bed	2.66	3.93	0.68	na
320	Motel	room	5.63	12.81	0.44	na
520	Elementary School	1,000 Sq Ft	15.43	15.71	0.98	1,018
530	High School	1,000 Sq Ft	12.89	19.74	0.65	1,531
540	Community College	student	1.23	15.55	0.08	na
550	University/College	student	1.71	8.96	0.19	na
565	Day Care	student	4.38	26.73	0.16	na
610	Hospital	1,000 Sq Ft	13.22	4.50	2.94	340
620	Nursing Home	1,000 Sq Ft	7.60	3.26	2.33	429
710	General Office (avg size)	1,000 Sq Ft	11.03	3.32	3.32	301
760	Research & Dev Center	1,000 Sq Ft	8.11	2.77	2.93	342
770	Business Park	1,000 Sq Ft	12.44	4.04	3.08	325
820	Shopping Center (avg size)	1,000 Sq Ft	42.70	na	2.00	500

\* Trip Generation, Institute of Transportation Engineers, 9th Edition (2012).

# Introduction

The Consensus Forecast for Washoe County uses a number of leading forecasts, which has several advantages over using a single source for forecasting population. Not only does the consensus approach minimize the risk of large forecast errors, but consensus forecasts consistently outperform individual forecasts across a range of variables. The consensus approach is discussed in further detail in the article titled "Consensus Forecasts in Planning," found in Appendix A.

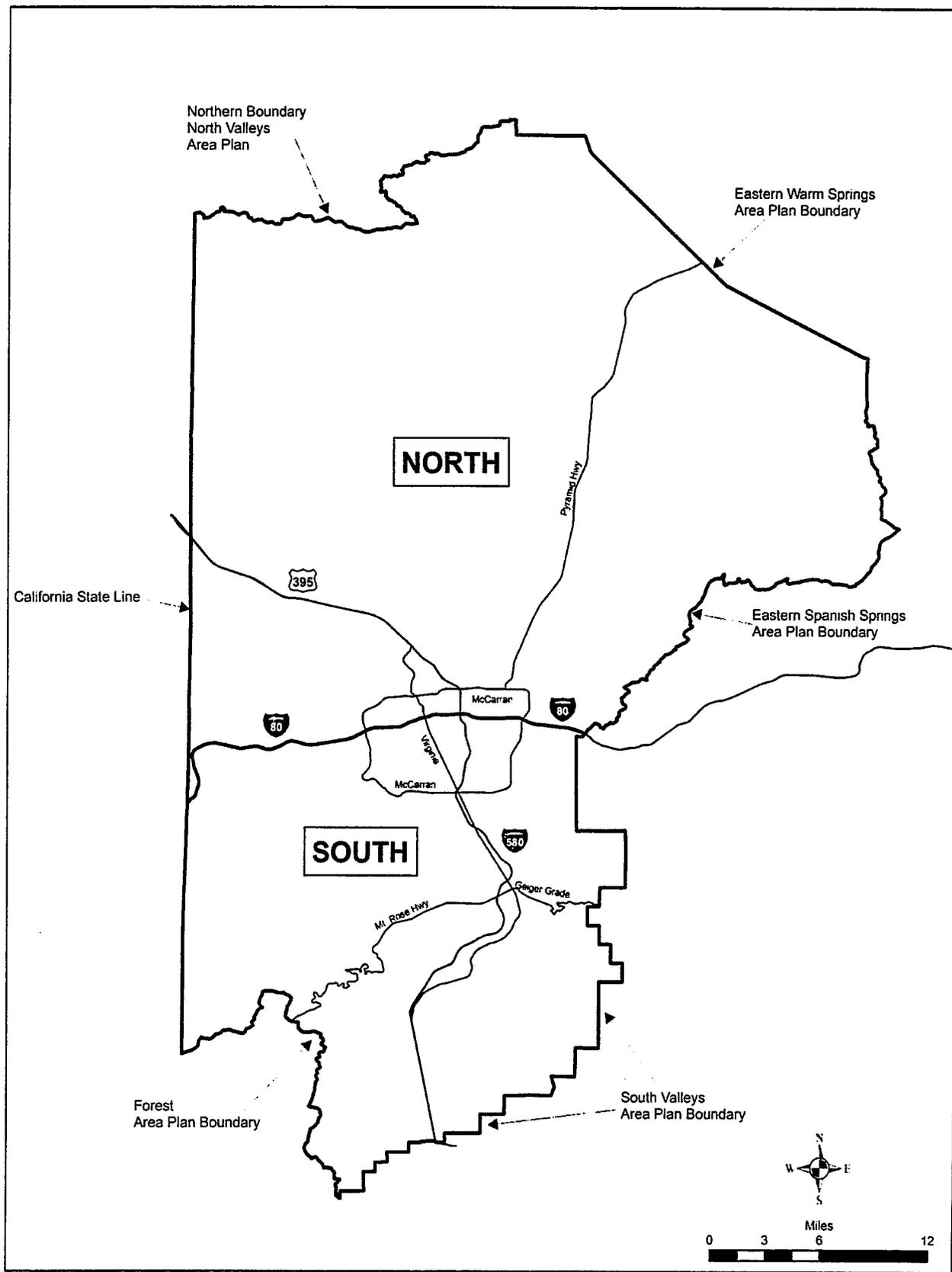
Four reputable sources of long-term forecasts for Washoe County were used: Global Insight, a national forecasting firm in Massachusetts that prepares national, state and county forecasts; Woods and Poole, a national forecasting firm in Washington, DC, that forecasts for every county in the United States, as well as state and national forecasts; Truckee Meadows Water Authority's *Population and Employment Econometric Model*; and the 2011 Nevada State Demographer's Forecast.

The *Washoe County Consensus Forecast 2012-2032*, uses these sources and outlines the projected population, employment and income for Washoe County through the year 2032. The forecasts in this document are for all of Washoe County (Reno MSA) including both the cities of Reno and Sparks and the unincorporated areas of Washoe County, including Incline Village. A summary of the consensus forecast for Washoe County is shown in Table 1.

**Table 1**

**Washoe County Consensus Forecast Summary**

<b>Year</b>	<b>Total Population</b>	<b>Total Employment</b>	<b>Total Personal Income \$ ('000)</b>	<b>Per Capita Income</b>
2012	425,930	273,042	\$17,421,365	\$47,467
2017	458,322	295,122	\$21,160,211	\$57,366
2022	490,591	314,868	\$25,969,219	\$69,625
2027	524,657	337,369	\$31,575,402	\$84,353
2032	560,772	361,065	\$38,429,313	\$103,178



**Figure 9 – North Service Area Capital Improvements Plan**

#	Project Description	Extent	Estimated Cost (2014 dollars)	RRIF Share	RRIF Funding
1	Additional Ramps	TBD (5 ramps)	\$50,000,000	50%	\$25,000,000
2	Sparks Blvd (4 to 6 lanes)	I 80 to Baring Blvd	\$10,906,100	100%	\$10,906,100
3	Additional Intersections	TBD (5 intersections)	\$15,000,000	50%	\$7,500,000
4	Traffic Signals / ITS / Roundabouts	locations to be determined as needed (avg of \$500,000 per year)	\$14,060,800	36%	\$5,000,000
5	McCarran Blvd Intersection	@ N Virginia St	\$4,376,400	100%	\$4,376,400
6	4th St/Prater Way	I 80 to Vista Blvd	\$23,443,800	14%	\$3,282,100
7	Oddie Blvd/Wells Ave	Phase 1 US 395 to Pyramid Way	\$20,009,600	14%	\$2,801,300
8	La Posada Dr Roundabout	@ Cordoba Blvd	\$2,163,200	100%	\$2,163,200
9	Oddie Blvd/Wells Ave	Phase 2 I-80 to US 395	\$13,852,800	14%	\$1,939,400
10	Sun Valley Blvd	2nd Ave to Pyramid/Sun Valley/395 Connector	\$9,626,200	14%	\$1,347,700
11	Pedestrian & Bicycle Facilities within ROW	based on Bike/Ped Master Plan	\$5,408,000	14%	\$757,100
12	Sutro St	I 80 to McCarran Blvd	\$1,601,800	14%	\$224,300
13	Keystone Ave	I 80 to 7th St	\$1,051,500	14%	\$147,200
14	Pyramid Hwy	@ McCarran Blvd	\$71,385,600	0%	\$0
<b>TOTAL</b>			<b>\$247,835,800</b>	<b>27%</b>	<b>\$65,394,800</b>
Revenue from Sources Other Than RRIF ->				<b>73%</b>	<b>\$177,441,000</b>

**Figure 10 – South Service Area Capital Improvements Plan**

#	Project Description	Extent	Estimated Cost (2014 dollars)	RRIF Share	RRIF Funding
1	Additional Ramps	I-80 - (5 ramps)	\$50,000,000	50%	\$25,000,000
2	McCarran Blvd (4 to 6 lanes)	Mira Loma Dr to Greg St	\$16,774,000	100%	\$16,774,000
3	Mill St Extension (4 lanes)	McCarran Blvd to St Connector	\$14,817,900	100%	\$14,817,900
4	Pembroke (2 to 4 lanes)	McCarran Blvd to St Connector	\$15,381,000	50%	\$7,690,500
5	Additional Intersections	TBD (5 intersections)	\$15,000,000	50%	\$7,500,000
6	Wells Ave	Mill St to Kuenzli Ln	\$12,000,000	50%	\$6,000,000
7	Traffic Signals / ITS / Roundabouts	locations to be determined as needed (avg of \$500,000 per year)	\$14,060,800	36%	\$5,000,000
8	Kietzke Ln	Virginia St to Galletti Way	\$77,497,300	18%	\$4,049,500
9	4th St/Prater Way	Keystone Ave to I-80	\$15,493,800	18%	\$7,788,900
10	Virginia St	Plumb Ln to Liberty St	\$12,979,700	18%	\$7,336,300
11	Sparks Blvd (4 to 6 lanes)	Greg St to I-80	\$7,181,700	100%	\$7,181,700
12	Mill St/Terminal Way	Airport to Lake St	\$9,193,600	18%	\$1,654,800
13	Damonte Ranch Pkwy Intersections	@ I-80, Double R Blvd, Virginia St	\$1,677,400	100%	\$1,677,400
14	Keystone Ave	California Ave to I-80	\$8,250,300	18%	\$1,485,100
15	Oddie Blvd/Wells Ave	(Phase 2 Kuenzli to I-80)	\$6,156,800	18%	\$1,108,200
16	Pedestrian & Bicycle Facilities within ROW	based on Bike/Ped Master Plan	\$5,408,000	18%	\$973,400
17	Sutro St	4th St to I-80	\$736,900	18%	\$47,600
18	Geiger Grade (4 lanes)	Virginia St to Toll Rd	\$57,108,500	0%	\$0
19	Plumb Ln	McCarran Blvd to Ferris Ln	\$6,489,600	0%	\$0
20	South-East Connector (6 lanes)	South Meadows Pkwy to Greg St	\$778,866,600	0%	\$0
<b>TOTAL</b>			<b>\$513,967,900</b>	<b>20%</b>	<b>\$100,474,800</b>
Revenue from Sources Other Than RRIF >				<b>80%</b>	<b>\$413,493,100</b>